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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,328	09/21/2000	Gary W. Pace	121-112	8438

7590 01/07/2004

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EXAMINER	
GOLLAMUDI, SHARMILA S	
ART UNIT	PAPER NUMBER
1616	

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/667,328	PACE ET AL.	
	Examiner	Art Unit	
	Sharmila S. Gollamudi	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23,24,28 and 39-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23,24,28 and 39-54* is/are rejected.

7)☒ Claim(s) *43 and 53* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Receipt of Amendment D received October 6, 2003 is acknowledged. Claims 23-24, 28, and 39-54 are pending. Claims 16-22 are cancelled.

Claim Objections

Claim 43 and 53 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 43 depends on claim 42 which is the same scope has claim 43 and therefore it does not further limit the parent claims. Claim 53 depends on claim 52 which is the same scope has claim 53 and therefore it does not further limit the parent claims. Appropriate correction is requested.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23 recite campothecin, a derivative of campothecin, paclitaxel, a derivative of paclitaxel" which is indefinite since it is unclear what this encompasses. The applicant is requested to define "derivative" of the respective drug and cite support

for the definition. Applicant's specification merely recites derivative and one of ordinary skill would not be clear of what this encompasses.

Response to Arguments

Applicant provides a dictionary definition of the term "derivative" and argues that the term is well known in the art.

Applicant's arguments have been fully considered but they are not persuasive. The examiner is well aware of the definition of the term; however it is not the term that is being questioned, rather what the term encompasses. Numerous derivatives are known in the art with the removal or addition of moieties, the applicant has not provided the specific derivatives, which fall within the recited "derivatives" since applicant is not entitled to every derivative present in the art and future derivatives.

Allowable Subject Matter

The indicated allowability is withdrawn in view of the newly discovered reference(s). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by GB 1,527,638.

GB discloses a niclosamide suspension. The formulation contains niclosamide (particle size of 2 to 20 microns) in sesame oil, polyoxyethylene-sorbiatn monooleate, and 10% n-butanol. See examples. Additionally, lecithin is utilized in the examples. The suspension is administered to an animal.

Note that the limitation "wherein upon addition of said composition..." is intended use since the claim does not require the addition of the fluid aqueous medium. Furthermore, this limitation is inherent since the oil suspension will inherently form droplets when combined with an aqueous medium and since GB teaches the administration of the formulation to an animal; GB anticipates the instant invention.

Claim 24 is rejected under 35 U.S.C. 102(b) as being anticipated by Brown US 3,185,625.

Brown discloses injectable substances. The drug particles of 1.5-35 millimicrons are encapsulated with cellulose or synthetic polymers. See column 2, lines 40-61. The powder are then suspended in oil (mineral oil) and emulsified with water. The surfactants taught are Tween 20, polyoxyethylene sorbitan monolaurate. See column 3, lines 5-16. Drugs taught are toxoid, antigens, anti-allergic agents, hormones, and therapeutics. See column, lines 54-60.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere* Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Brown US 3,185,625 in view of JP 360174726.

Brown discloses injectable substances. The drug particles of 1.5-35 millimicrons are encapsulated with cellulose or synthetic polymers. See column 2, lines 40-61. The powder are then suspended in oil (mineral oil) and emulsified with water. The surfactants taught are Tween 20, polyoxyethylene sorbitan monolaurate. See column 3, lines 5-16. Drugs taught are toxoid, antigens, anti-allergic agents, hormones, and therapeutics. See column, lines 54-60.

Brown does not specify the drug utilized.

JP teaches the use of a peptide hormone (insulin) in an injectable formula to treat diabetes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look to the teaching of JP and utilize insulin in Brown's formulation. One would be motivated to do so since JP teaches insulin is a hormone that treats diabetes. Therefore, one would be motivated to incorporate the drug of choice to treat the desired disease, and in this case one would be motivated to utilize

insulin if one wanted to treat diabetes. Further, a skilled artisan would expect similar results since Brown teaches the suitability of hormones in the formulation.

Claims 23 and 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over by GB 1,527,638 in view of Hauer et al (5,342,625) or vice-versa.

GB discloses a "preconcentrate" niclosamide suspension. The formulation contains niclosamide (particle size of 2 to 20 microns) in sesame oil, polyoxyethylene-sorbiatn monooleate, and 10% n-butanol. See examples. Additionally, lecithin is utilized in the examples. The suspension is administered to an animal to treat parasitic infections. GB discloses administering the composition orally. See example A. The formulation has high antihelmithic activity and has very high stability. Further, GB discloses that another antiparasitic in an oily suspension gives better plasma concentration of the active compound compared than the aqueous suspension. See page 1, lines 40 to page 2, line 5.

GB does not specify the type of oral administration or the instant drug.

Hauer et al teach a pharmaceutical composition containing cyclosporin, an antiparasitic, in a preconcentrate or microemulsion form. The formulation contains a hydrophilic phase, a lipophilic phase, and a surfactant. See column 6, lines 45-50 and examples. The composition may be formulated for oral administration in a unit dosage form such as hard or soft gelatin. This type of administration has the advantage of controlled release of the composition, i.e. delayed release. See column 8, lines 45-50.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of GB and Hauer et al and utilize a

gelatin capsule. One would be motivated to do so to provide the formulation in a gelatin capsule to provide for a unit dosage and to modify the release of the drug. Therefore, a skilled practitioner would utilize a capsule to provide for a unit dosage form for easier consumption and this type of dosage forms allow for one to modify the release rate. Furthermore, Hauer teaches the instant active agent. One would be motivated to utilize the instant drug to treat the desired disease.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to look to the teaching of GB and utilize an oily suspension in Hauer's formulation. One would be motivated to do so since GB teaches the oily suspensions have better resorption of the medicament than the aqueous suspension, and give better plasma concentration.

Claims 23, 24, 39-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Sato et al (5,814,324) in view of GB 1,527,638 or Brown (3,185,625).

Sato et al teach a method of preparing injectable compositions containing the anti-fungal itraconazole. The 0.1g compound is either dispersed or dissolved in 10g of soybean oil, 10g lecithin, and 2.5g of glycerol. The fat particles have a mean size of 45 nm. See example 1 and 5 in combination.

Although Sato teaches dispersing the compound in the oil phase, the reference does not teach the particle size of the drug.

GB discloses a "preconcentrate" niclosamide suspension and method of preparing the formula. The formulation contains niclosamide (particle size of 2 to 20

microns) in sesame oil, polyoxyethylene-sorbiatn monooleate, and 10% n-butanol. See examples. Additionally, lecithin is utilized in the examples. The suspension is administered to an animal to treat parasitic infections such as worms. GB discloses administering the composition orally. See example A. Lecithin is taught in example 1. GB teaches the drug particles size is usually smaller than 2 microns to prevents particle growth, which prevents good resorption of the drug. Thus, the formulation has high antihelmithic activity and has very high stability. Further, GB discloses that another antiparasitic in an oily suspension gives better plasma concentration of the active compound compared than the aqueous suspension. See page 1, lines 40 to page 2, line 5.

Brown discloses injectable substances. The drug particles of 1.5-35 millimicrons are encapsulated with a cellulose or synthetic polymers. See column 2, lines 40-61. The particle size of the encapsulated drug is small enough to pass though a hypodermic injection. See column 1, lines 48-51. The powder are then suspended in oil (mineral oil) and emulsified with water. The surfactants taught are Tween 20, polyoxyethylene sorbitan monolaurate. See column 3, lines 5-16. Drugs taught are toxoid, antigens, anti-allergic agents, hormones, and therapeutics. See column, lines 54-60.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sato et al and GB and utilize the instant particle size. One would be motivated to do so since GB teaches that the instant particle size prevents particle growth and particle growth prevents good resorption of

the drug. Therefore, one would be motivated to use the instant size the provide for a formulation that has good resorption and stability.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sato et al and Brown and utilize the instant particles size. One would be motivated to do so since Brown teaches the particle size of the drug, which is in the instant range, should be small enough to pass through the hypodermic needle. Therefore, it is obvious to utilize the instant particle size so that an artisan may utilize a hypodermic needle to administer the formulation if one wanted to administer the formulation via an injection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharmila S. Gollamudi whose telephone number is (703) 305-2147. The examiner can normally be reached on M-F (7:30-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on (703) 308-2927. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3014.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Sharmila S. Gollamudi
December 18, 2003

THURMAN K. PAGE
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